In The United States Patent Office

In re Albert M. FLEISCHNER, Ph.D., "Herbal Composition for Weight Control"	Serial No. 10/693,442 Filed 23 October 2003

RULE 132 DECLARATION

I, Albert M. Fleischner, Ph.D., do hereby swear as follows:

1) I received a Bachelors of Science in Pharmacy in 1963 from Temple University, Philadelphia, Pennsylvania. I received a Masters of Science in Pharmaceutical Science in 1970 from Rutgers University, New Brunswick, New Jersey. I received a Doctorate in Philosophy in Pharmaceutical Sciences in 1976 from Rutgers University, New Brunswick, New Jersey.

2) After receiving my Doctorate in Philosophy, I worked as a Group Leader in Personal Care and OTC Products at the Lehn & Fink division of Sterling Drug

Corporation; as the Manager of Technical Services for Amerchol Inc.; as a pharmaceutical manufacturing process development scientist at Schering Plough R&D; as the Director of Technical Service at International Sourcing, Incorporated; as the Director of Pharmaceutics at Roberts Pharmaceutical, Inc.; and as the Vice President of Manufacturing and Research & Development at Bradley Pharmaceutical.

3) I currently am the Chief Scientific Officer of the assignee for the captioned patent application. As such, I am responsible for, among other things, developing dietary supplement formulations and assessing the clinical support for dietary supplement labeling claims.

4) I am the inventor of record of United States Letters Patent No. 6,420,350, United States Published Patent Application No. 2002/0136781, and several others. I am the inventor of record of one of the references which is cited against the immediate application.

5) I therefore respectfully believe that I am one of skill in the art.

6) I have reviewed the art of record in this case, including Fanie Retief VAN HEERDEN *et al.*, *Pharmaceutical Compositions Having Appetite Suppressant Activity*, U.S. LETTERS PATENT NO. 6,376,657; Orien Lee TULP *et al., Effect Of Hoodia Plant on Food Intake and Body Weight In Lean and Obese LA/Ntul//-cp*

Rats, 15 FASEB JOURNAL A404 (March 7, 2001) (Abstract only) ("TULP 2001"); Martina HABECK, *A Succulent Cure To End Obesity*, 7 DRUG DISCOVERY TODAY 280 (March, 2002); Tamar KAHN, *Prickly Dispute Finally Laid To Rest*, BUSINESS DAY (Johannesburg) (22 March 2002); Janice LIMSON, *Focus On Biopiracy In Africa*, SCIENCE IN AFRICA (September 2002); WIMSA, *San Rights Vis-à-vis The Hoodia Succulent*, WIMSA REPORT ON ACTIVITIES (2003); Jen CULLY, *African Hoodia Gordonii Plant May Help Fight Fat* (21 Nov. 2004); Anthony BARNETT, *In Africa the Hoodia Cactus Keeps Men Alive*, THE OBSERVER (17 June 2001); and *Phytopharm Boosts P57 Production*, MARKET LETTER (10 December 2001).

7) I have also reviewed the OFFICE ACTION dated 10 February 2006. I respectfully disagree with the Examiner's characterization of much of the aforementioned prior art. I infer that much of the Examiner's misunderstanding regarding the art of record is based on the fact that this art is largely drawn not from peer-reviewed scientific literature, but from meeting announcements, corporate publicity releases and newspaper summaries.

Jen CULLY

8) Regarding Jen CULLY, *African Hoodia Gordonii Plant May Help Fight Fat* (21 Nov. 2004), the OFFICE ACTION at page 4 says:

> the only place in the world where *Hoodia gordonii* grows is in South Africa – e.g., this cactus plant only grows wild in the Kalahari

> Desert.... it is not apparent if the plant is readily available to the public.

I respectfully disagree. *Hoodia gordonii* does indeed grow wild in the Kalahari Desert, along a range lying in South Africa and in the adjoining nation of Namibia. This is not, however, "the only place in the world" where the plant grown. Rather, the botanical literature discussing Hoodia does not identify any reason why this cactus could not be cultivated in any similar arid environment. *See e.g.*, Pieter VAN DER WANT *et al.*, THE KALAHARI AND ITS PLANTS at 85 (1999); T.H. ARNOLD *et al.*, MEDICINAL AND MAGICAL PLANTS OF SOUTHERN AFRICA at 170-71 (Stelitzia Ltd., publ., 2002); Ben-Erik VAN WYK *et al.*, PEOPLE'S PLANTS: A GUIDE TO USEFUL PLANTS OF SOUTHERN AFRICA at 63, 70-71, 74 (2000); Richard COWLING *et al.*, NAMAQUALAND, A SUCCULENT DESERT at 39-51 (Botanical Soc. of South Africa, publ., 1999). For the convenience of the Examiner, I enclose copies of each of these references.

9) This is confirmed by current practice in the industry. For example, I see no reason that this cactus could not be cultivated, as are many other types of cacti, in a non-desert location in a greenhouse; for example, I understand that *Hoodia gordonii* is now cultivated in The United Kingdom.

Orien Lee TULP *et al.* ("TULP 2001")

10) Regarding Orien Lee TULP *et al., Effect Of Hoodia Plant on Food Intake and Body Weight In Lean and Obese LA/Ntul//-cp Rats*, 15 FASEB JOURNAL A404 (March 7, 2001) (Abstract only) ("TULP 2001"), the OFFICE ACTION at page 8 says:

> Tulp et al. beneficially teach that a ground-up slurry of *Hoodia gordonii* plant effectively decreased the body weight of obese rats and hat the results of this study indicate that orally administered *Hoodia Gordonii* has strong potential for clinical appetite regulation and weight control.

I respectfully disagree with certain of the facts asserted or implied by this statement.

One Of Skill In The Art Would Read TULP 2001 To Conceal His Actual Results Regarding Appetite Suppression

11) One of skill in the art would read TULP 2001 to teach that certain amounts of *Hoodia sp.* extract or aqueous slurry cause appetite suppression in 50% of the laboratory rats tested. TULP says, "The ED50 for appetite suppression in a 4 h feeding test ranged from 1.8 to 2.7 g/kgBW/rat for the various Hoodia sp, and were similar in both lean and obese phenotypes."

12) TULP is, however, pointedly vague in disclosing *how much* appetite suppression is caused. TULP says,

> "Spontaneous FI [food intake] decreased by < 50% within 2h of administration of crude plant mixture or extract."

One of skill in the art would read this to teach that within two hours after administration of Hoodia, food intake decreased by less than 50%.

13) How much less, however, is left to speculation. For example, food intake might have decreased by 49%; that is, food intake might have decreased to 100% - 49% = 51% of the pre-administration level food intake level, a significant decrease.

14) Alternatively, food intake might have decreased by 10%, leaving food intake at 90% of the pre-administration level food intake level. For a 2 hour period for laboratory rats, this would be a statistically-insignificant change in food intake.

15) Alternatively, TULP might have observed a food intake decrease of less than 0% – that is, a net ***increase*** in food intake.

16) TULP 2001 is an Abstract of a conference presentation. As such, it does not purport to provide a full and candid disclosure of the researchers' results. Rather, it merely provides an enticing hint of the potential contents of that presentation, enticing the reader to attend that presentation and find out more about the researchers' results. The Abstract itself, however, pointedly conceals whether *Hoodia* causes a net increase or decrease in food intake.

TULP (2001) Investigates Rats Genetically Bred To Have Abnormal Body Mass and An Abnormal Relationship Between Body Mass and Food Intake

17) It is known in the art to use laboratory rats with any of a variety of genetic mutations which provide "uniquely different metabolic characteristics including diabetes (NIDDM), atherosclerotic traits, renal dysfunction, and congestive heart failure." *See* Orien Lee TULP *et al., Animal Model: Metabolic and Thermic Responses To Diet and Environment (4° C) In Obesity During Aging In the LA/Ntul//-cp Rat*, 1 NESTLÉ NUTRITION SERIES: CLINICAL & PERFORMANCE PROGRAMME 149, 150 (Karger AG, Basel, publ., 1999) ("TULP (1999)").

18) TULP (2001) teaches results obtained in LA/Ntul//-cp laboratory rats. The LA/Ntul//-cp rat is a rat with a specific constellation of genetic mutations. *Id.* This constellation of genetic mutations impart "marked obesity, impaired carbohydrate tolerance, hyperamylinemia, hypertrigliceridimia and hypercholesterolemia, and an impaired capacity for nonshivering thermogenesis (NST) and energy expenditure." *Id.* at 149.

19) Therefore, it is known in the art that LA/Ntul//-cp rats have an abnormal sugar metabolism and an abnormal relationship between body mass and food intake. TULP (2001) teaches that this relationship is, however, highly variable, so an individual LA/Ntul//-cp rat could be obese or could be lean, or could be

something in between. TULP (2001) at AB line 4 thus teaches to use both "lean and obese" phenotypes.

20) Given the effects of this constellation of mutations on body weight and metabolism, one of skill in the art would understand that results obtained with LA/Ntul//-cp laboratory animals would not necessarily correlate into an equivalent result in humans, or at least not in humans not carrying the same constellation of genetic mutations.

21) This is confirmed by TULP (2001). In summarizing their results, TULP (2001) does not conclude that *Hoodia* is effective for weight control in humans. Rather, TULP (at AB line 26-27) concludes: "These results indicate that Hoodia sp. may have strong potential for clinical appetite regulation and weight control." One of skill in the art would not read this to say that TULP teaches that *Hoodia sp.* is effective for human weight control. Rather, one of skill in the art would read this as an invitation to pursue further experimentation (in non-mutant rats, for example, or in humans) to determine whether or not *Hoodia sp.* may be effective for human weight control.

22) This conclusion is to be expected because Orien Lee TULP, being one of skill in the art, would not assume that the results obtained with LA//Ntul//-cp laboratory rats would show efficacy in humans.

23) I respectfully believe that my interpretation of TULP (2001) is corroborated by extrinsic evidence of product marketing. As part of my professional duties, I attempt to remain aware of the new products in this industry. I know of no product with a weight-control effective amount of *Hoodia gordonii* which was launched contemporaneously with, nor shortly after, the March, 2001 publication of TULP (2001). In contrast, shortly after the assignee of my patent launched its TrimSpa® brand hoodia product, this product was widely copied (*e.g.*, by TrimClub™, TrimSmart™ and HoodiaSpa™).

Fanie Retief VAN HEERDEN *et al.*

24) In my earlier DECLARATION, I say that the difference between "appetite suppression" and "weight loss" is known in the art. I add here John BLUNDELL, *Pharmacological Approaches To Appetite Suppression*, 12 TRENDS IN PHARMACOLOGICAL SCIENCES 147 (1991) (copy attached), which confirms this:

> Food is an excellent anorexic agent which is known to reduce hunger and to suppress eating for some time after administration. However, one major disadvantageous side-effect of food as an appetite suppressant is that it is also known to lead to weigh gain. ... The development of safe and effective anti-obesity drugs involves far more than control of appetite; it includes *inter alia* the intention to alter processes concerned with energy expenditure, fat synthesis and storage, and the digestion and absorption of nutrients.

I respectfully believe that this confirms that appetite suppression and weight loss are not equivalent concepts.

Martina HABECK

25) Regarding Martina HABECK, *A Succulent Cure To End Obesity*, 7 DRUG DISCOVERY TODAY 280 (March, 2002), the OFFICE ACTION says:

> Habeck also beneficially teaches that the cactus plant Hoodia gordonii (and extracts thereof) is well known to be useful as an anti-obesity agent

I respectfully disagree with the Examiner's characterization of this reference.

26) HABECK (at page 280, column 3) summarizes a December 2001 corporate news release announcing the completion of the third phase of a proof-of-principle study in humans. HABECK says:

> In the third phase, they moved on to investigate the effects on calorie intake in 19 overweight men who took the compound or placebo twice daily for 15 days. By the end of the study, men in the treatment group achieved a 30% reduction in calorie intake, accompanied by a significant reduction in body fat content by 1 kg. Dixey says, "this was a very demanding clinical study because people had nothing to do but eat and watch TV. To get an appetite suppressant to work in such an environment was very impressive and it shows how potent this drug is."

What HABECK does not say about this study, however, is at least as important as what HABECK does say.

27) First, HABECK fails to say that the study placed the test subjects in a phase-1 unit under "prison-like" conditions. In discussing the same third phase study discussed in HABECK, an Australian newspaper (THE AGE) noted:

> When the first human clinical trial was conducted by Phytopharm, the company chose a morbidly obese group of people from Leicester England, and placed them in a "phase 1 unit", a place as close to prison as it gets. All the volunteers could do was read papers and watch television – and eat. ... At the end of 15 days, the group on Hoodia had reduced their food intake by 1000 calories a day.

See Tom MANGOLD, *Magic Molecule* THE AGE (Australia) (23 June 2003) at Section A3, page 6. (I enclose a printout of this article. As the printout is legible with difficulty, I also append the full text of this article).

28) One of skill in the art reading the description of the third-phase study given in HABECK (or in MANGOLD) would question whether the body fat loss experienced by the *Hoodia*-administered test subjects was due to *Hoodia*, or due simply to holding the test subjects in prison-like conditions.

29) Determining this would require comparing the results seen in the *Hoodia*-administered test subjects to the results seen in the control group. The company which actually performed the study (Phytopharm, Ltd. of the United Kingdom), however, has refused to publish the results observed in the control group. *Cf.* HABECK (discussing only the results observed in "the treatment group"); MANGOLD (same). This omission makes it impossible for one of skill in the art to accurately ascertain whether the body fat loss was unique to the treatment group or was common to all test subjects.

30) One of skill in the art would recognize this omission of control group results as highly unusual. One of skill in the art would also read HABECK to conceal data necessary to correctly assess the third-phase test discussed. One of skill in the art would therefore likely read HABECK to imply that because the control group data had been concealed, that data is adverse (that is, that the control group results show no body fat loss caused by the tested *Hoodia* extract). One of skill in the art would therefore read HABECK (and MANGOLD) to: (A) fail to teach that *Hoodia* extract causes weight loss; and (b) imply that the *Hoodia* extract ***does not*** cause weight loss.

31) One of skill in the art would read HABECK to merely invite further experimentation. HABECK itself corroborates my interpretation. HABECK quotes Susan Jebb of the Medical Research Council (Cambridge, United Kingdom):

> Susan Jebb ... agrees that the results of the proof-of-principle study are very encouraging. However, she stresses that it is early days. "The studies they have done so far are only up to two weeks long. Now, they have to do longer studies in more people to demonstrate that this is a consistent effect. Obesity is a chronic relapsing problem and you need a treatment that is going to work safely and effectively over much longer periods of time."
>
> Dixey says their next step will be to take a closer look at the dosing interval and other pharmacodynamic parameters.

Susan Jebb confirms that as of March 2002, it was still "*early days*" in the research towards the claimed invention. Susan Jebb confirms that short-term (up to two week) studies *do not* predict a *consistent* effect, nor do they predict effectiveness in *long-term* use. One of skill in the art would therefore read HABECK to invite further experimentation, not teach the claimed invention.

Anthony BARNETT

32) Regarding Anthony BARNETT, *In Africa the Hoodia Cactus Keeps Men Alive*, THE OBSERVER (17 June 2001), the Examiner says:

> Barnett also beneficially teaches that the cactus plant *Hoodia gordonii* (and extracts thereof) is well known to be useful as an anti-obesity agent (see entire 3 page document).

I respectfully disagree with the Examiner's characterization of BARNETT. BARNETT at page 1, line 1, teaches that "African tribesmen have eaten the Hoodia cactus to stave off hunger and thirst on long hunting trips." In so doing, BARNETT teaches no more than does the prior art I discuss in my Specification. The remainder of BARNETT is not germane to my patent claims.

Tamar KAHN

33) Regarding Tamar KAHN, *Prickly Dispute Finally Laid To Rest*, BUSINESS DAY (Johannesburg) (22 March 2002), the Examiner says:

> Kahn also beneficially teaches that the cactus plant *Hoodia gordonii* (and extracts thereof) is well known to be useful as an anti-obesity agent (see entire 4 page document).

I respectfully disagree with the Examiner's characterization of KAHN. KAHN at page 1 teaches that "the San have used the Hoodia cactus as an appetite suppressant and thirst quencher." In so doing, KAHN teaches no more than does the prior art I discuss in my Specification. The remainder of KAHN is not germane to my patent claims.

The Examiner's Proposed Rationale to Modify the Prior Art

34) I respectfully believe that the foregoing prior art fails to support – and indeed even contradicts - the Examiner's proposed rationale to modify the prior art to make the claimed invention. As rationale, the Examiner says:

> It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made [to] repeatedly administer a weight-reducing amount of *Hoodia gordonii* to an obese and/or overweight subject, based upon the beneficial teachings of each of the cited references with respect to its well recognized activity in promoting weight loss and / or acting as an anti-obesity agent. The adjustment of particular conventional working conditions – e.g., determining appropriate, suitable time periods and intervals for orally administering such a Hoodia gordonii weight loss product – is deemed merely a matter of judicious selection and routine optimization which is well within the purview of the skilled artisan.

I respectfully disagree.

35) First, the Examiner asserts that the art of record shows that *Hoodia gordonii* is "well recognized activity in promoting weight loss and / or acting as an anti-obesity agent." This is incorrect. As explained in my previous DECLARATION, some of the prior art of record shows that *Hoodia gordonii* had "well-recognized activity" in promoting weight ***gain***, not weight loss. Some of the newly-raised art of record corroborates this; for example, as discussed above, HABECK implies that *Hoodia gordonii* extract ***is not effective*** for weight loss.

36) Alternatively, some of the newly raised art (BARNETT, KAHN) teaches appetite suppression; as explained in my previous DECLARATION, appetite suppression is not weight loss. No art of record teaches that *Hoodia gordonii* is effective for human weight loss or as a human anti-obesity agent. The art of record therefore fails to support the Examiner's assertion that *Hoodia gordonii* is "well recognized activity in promoting weight loss and / or acting as an anti-obesity agent."

37) Second, the Examiner asserts that "determining appropriate, suitable time periods and intervals for orally administering such a *Hoodia gordonii* weight loss product – is deemed merely a matter of judicious selection and routine optimization." The Examiner's assertion is contradicted by the art of record. HABECK, for example, expressly teaches that two week dosing intervals do not

demonstrate a consistent effect, nor that *Hoodia* is safe and effective when administered over longer periods of time. HABECK also teaches that given the prior art at the time, those of skill in the art needed "to take a closer look at the dosing interval" before arriving at an operable invention. I therefore respectfully believe that the prior art shows that finding an effective dosing interval represents more than "routine optimization."

Summary

38) In view of the foregoing, I respectfully believe that my pending patent claims are not obvious in light of the art of record.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United State Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon or any patent to which this verified statement is directed.

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Albert M. FLEISCHNER, Ph.D.

Dated as of 10 March 2006

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39) In view of the foregoing, I respectfully believe that my pending patent claims are not obvious in light of the art of record.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United State Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon or any patent to which this verified statement is directed.

Albert M. Fleischner

Albert M. FLEISCHNER, Ph.D.

Dated as of 10 March 2006

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Magic molecule

Author: Tom Mangold
Date: 23/06/2003
Words: 1938

Publication: The Age
Section: A3
Page: 6

A cactus in the Kalahari desert may save the West from obesity and bring millions of dollars to an impoverished African tribe, writes Tom Mangold.

Imagine this. A pill that kills the appetite and attacks obesity, is organic, with no chemicals added, has no known side effects, and contains a miracle **molecule** that fools the brain into believing you are full and even stops you thinking about food.

A mirage? A product as likely as the pill that turns water into petrol? No. It's true and it's here. And I know it works because I've tried it.

Deep inside the arid Kalahari desert, which intrudes into South Africa, Namibia and Botswana, grows an ugly looking cactus (actually a succulent) called the Hoodia plant. It thrives in temperatures that boil your brain - 50 degrees plus, and it takes years to mature.

When scientists at the South African Centre for Scientific and Industrial Research were routinely testing the cactus for commercial or medicinal value, they discovered to their amazement that the plant contained a new **molecule**, unknown to man, since christened P.57.

The Eureka moment came when the boffins from CSIR checked with the San tribe of bushmen, equivalent to the Aborigines of Australia and among the world's oldest and most primitive hunter-gatherers, who have historically eaten the Hoodia during their hunting trips in the Kalahari. To stave off the worst of the hunger pangs during their trips across infertile lands, they chewed the Hoodia. They've been eating this for thousands of years and believe me, you won't see a fat San today.

Once the South Africans realised what they had, they sold the license for P.57 to a small British bio-pharma-ceutical company, Phytopharm, which has an ethical policy of rewarding the Third World for pharmaceutical breakthroughs that make money for the First World.

As soon as the implications of P.57 were absorbed by the British, Phytopharm sold the development and marketing rights to the giant Pfizer Corporation for $US32 million ($A47.5 million). They in turn have invested a further $US400 million in a product that could rival their own Viagra for profits.

When I travelled to the Kalahari recently to try it for myself, I met families of the San bushmen, a sad, impoverished and displaced tribe, still unaware that they are sitting on a green/goldmine. If the Hoodia works as most believe it will, the 100,000 San strung along the edge of the Kalahari will become overnight millionaires on royalties negotiated on their behalf by their ``white-knight", South African lawyer Roger Chennells. They'll need all the help they can get to handle the lottery win. Currently many smoke industrial quantities of marijuana, suffer from alcoholism, and have neither possessions nor any sense of the value of money. One notable exception - their highly intelligent negotiator, Petrus Valboie, who will be working to create and help administer a trust fund for his tribe, doesn't own the shirt on his back or the chinos he travels in.

The truth is no one has grasped what the **magic molecule** means for their fat counterparts in the developed world. More than 100 million people in the developed world are now clinically obese. Soon it will be statistically safer to smoke than to overeat. A pandemic of obesity is sweeping the world and in its wake come the attendant plagues of diabetes and heart attacks.

Sure, you can try every appetite suppressant on the market until those amphetamine ``jiggers" give you the permanent shakes, pay hundreds of dollars for every fashionable medical injection, or slavishly follow each new diet fad, but the results are awfully similar. Ninety per cent of us will finish up where we started - overweight and still eating too much. And for the very fat - an early death is often predictable.

The truth about food after 40 is that it is required for maintenance only. We really don't need to eat that much to keep healthy, trim and fit. The problem is we live in a culture that forces food at us. In America, people already snack all day. There are no meal times. We think too much about food, make too many ceremonies around it. But how can we stop?

The miracle of Hoodia is that it seems to do it for you. According to Dr Richard Dixey, the boss of Phytopharm, here's how P.57 actually works: ``There's a part of your brain, the hypothalamus, and within that mid-brain there are nerve cells that sense glucose sugar. Now when you eat, blood sugar goes up because of the food, and these cells start firing and now you are full.

``But the problem with the overweights and the obese is that they will still sneak down the fridge at two in the morning and hit the HaagenDaz, consume huge amounts of calories and still not feel full," Dixey says.

``What the Hoodia seems to contain is a **molecule** that's about ten thousand times as active as glucose. It goes to the mid-brain and actually makes those nerve cells fire as if you were full. But you haven't eaten food. Nor do you want to. That's how it works."

When Dixey organised the first animal trials for Hoodia he was astonished to discover that rats, a species that will eat literally anything, not only stopped eating, but even lost interest in what to a rat is a five-star cordon bleu delicacy, salami and chocolate.

When the first human clinical trial was conducted by Phytopharm, the company chose a morbidly obese group of people from Leicester, England, and placed them in a ``phase 1 unit", a place as close to prison as it gets. All the volunteers could do was read papers and watch television - and eat. Half the group were given Hoodia, half were given placebo. At the end of 15 days, the group on Hoodia had reduced their food intake by 1000 calories a day. Given the average daily diet is around 2200 calories, this was a stunning success.

S o we set out for the Kalahari desert four hours north of Cape Town in search of the cactus. It turns out to be an unattractive plant that sprouts about 10 tentacles the size of a long cucumber. Each tentacle is covered in spikes, which need to be carefully peeled. Inside is a slightly unpleasant-tasting, fleshy plant. I ate about half a banana size - and later so did my cameraman. It was about 6pm. I did not then believe in the tooth fairy or the Hoodia.

Soon after we began the four-hour drive back to Cape Town. The plant is said to have a feel-good almost aphrodisiac quality, and I have to say we felt good. But more significantly, we didn't think about food. Our brains really were telling us that we were

full. It was a magnificent deception. Dinner time came and went. We reached our hotel at about midnight and went to bed without thinking of food. Neither of us wanted nor did we eat breakfast. I had a very light lunch but consumed it without appetite and very little pleasure. Partial then full appetite returned slowly after 24 hours. It was no scientific test but that plant worked on me.

The San bushmen all tell me the plant has a distinct aphrodisiac effect too. I didn't experience that, but I did have a feeling of well-being that was most unusual.

Valboie says the plant is a wonder-plant, giving energy to scour the desert by day and a new strength to make love all night. It allegedly cures hangovers and settles an upset stomach too.

Chennells, the San's lawyer, gave some Hoodia to a fat dog and it immediately stopped eating. He tried it himself and he lost his appetite. Did it have an aphrodisiac effect on him? ``Let's just say I was in the desert, alone, and I felt very strong," he smiled.

If there are side effects - and the clinical trials have still got three to four years to run, they have yet to emerge. Chennells is ecstatic: ``The San will finally throw off thousands of years of oppression, poverty, social isolation and discrimination. We will create trust funds with their Hoodia royalties and the children will join South Africa's middle classes in our lifetime." The royalties will allow the San (who were once hunted like animals by the whites) to buy their own land, and to join the 21st century. The irony is that a primitive and impoverished Third World tribe will be passing its historic knowledge of the miracle **molecule** to a developed world groaning under the weight of its insatiable appetites.

Says Chennells: ``I envisage Hoodia cafes in London and New York, salads will be served and the Hoodia cut like cucumber onto the salad. It will need flavouring to counter its unpleasant taste, but if it has no side effects and no cumulative side effects - and it hasn't for the San as far as we know, then the fat world will have found the silver bullet it's been looking for."

But the new green/gold rush in South Africa has already brought in the snake-oil salesmen and bandits. Earlier this year, in Namibia, a group of men was stopped by the police as they were taking Hoodia plants out of the sand. The men claimed to have permission from the CSIR in Pretoria, but this was a lie. They were one of several groups of bio-pirates, scouring the vast emptiness of the Kalahari looking to steal the precious Hoodia and smuggle it out of southern Africa.

I discovered some of the Hoodia has already reached the United States where a ``grey" market in the Hoodia has already taken off. You can check the net for Hoodia products, but be careful, as the ones I found are worthless frauds. One popular ``Hoodia" appetite suppressant sells under the name of Lipodrene. I had the pill independently analysed in London and it turns out to have ``no discernible Hoodia" in it. I would be equally careful of trying any other alleged Hoodia pills. Pfizer have sole marketing rights, the clinical trials have three or four years to run so be patient.

And don't try travelling to the Kalahari to find the cactus on your own. Not only is it illegal to export it, it will die long before you step off the plane in Australia. Besides, the Kalahari is inhospitable, and the only people who can help you locate it in the wild, the

San bushmen, are the very people who won't help as they would be robbing themselves of their inheritance.
Besides, the plant is becoming more rare. The South African CSIR are now cultivating it in industrial quantities at a secret location under armed guard. The truth is, that if the plant delivers on its initial promise, it will do for fat people what pain killers have done for headaches, and Viagra for sex. But it still has a way to go before it can be synthesised into a simple pill.
There is one way in which you might be able to beat the system legally. The Hoodia thrives only in deserts at a temperature of 50 degrees and over. Australia has such an environment. It's just possible, the plant grows wild here too.
Tom Mangold and Dominick Ozanne's film The Anti-fat Pill and the Bushmen was made for BBC TV's Correspondent program.

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